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10/815,765

04/02/2004

Chiaki Hamada

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OLIFF & BERRIDGE, PLC
P.O. BOX 320850
ALEXANDRIA, VA 22320-4850

EXAMINER

MANCHO, RONNIE M

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**BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES**

Application Number: 10/815,765
Filing Date: April 02, 2004
Appellant(s): HAMADA ET AL.

James A. Oliff

For Appellant

EXAMINER'S ANSWER

This is in response to the appeal brief filed 4/30/09 appealing from the Office action mailed 7/10/08.

(1) Real Party in Interest

A statement identifying by name the real party in interest is contained in the brief.

(2) Related Appeals and Interferences

The examiner is not aware of any related appeals, interferences, or judicial proceedings which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

(3) Status of Claims

The statement of the status of claims contained in the brief is correct.

(4) Status of Amendments After Final

The appellant's statement of the status of amendments after final rejection contained in the brief is correct.

(5) Summary of Claimed Subject Matter

The summary of claimed subject matter contained in the brief is correct.

(6) Grounds of Rejection to be Reviewed on Appeal

The appellant's statement of the grounds of rejection to be reviewed on appeal is correct.

(7) Claims Appendix

The copy of the appealed claims contained in the Appendix to the brief is correct.

(8) Evidence Relied Upon

20020185913

Watanabe

12-2002

(9) Grounds of Rejection

The following ground(s) of rejection are applicable to the appealed claims:

DETAILED ACTION

Claim Rejections - 35 USC § 102

- i) The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

- ii) Claims 1-15 are rejected under 35 U.S.C. 102(e) as being anticipated by Watanabe (2002/0185913).

Regarding claim 1, Watanabe (abstract, sec 0008, 0009, 0019-0021, 0062, 0068, 0075; figs. 1-5) disclose a device for controlling braking of a vehicle, the vehicle having front and rear wheels, the device comprising:

a braking system ((figs. 1A&B) generating braking forces on the respective wheels (abstract, sec 0008, 0009, 0019-0021; figs. 1-5);

at least one sensor 96 (fig. 1B) monitoring an operational condition of the vehicle including a detector detecting an amount of a braking action by a driver of the vehicle (abstract, sec 0008, 0009, 0019-0021; figs. 1-5); and

a controller 92 (fig. 1B) that is configured to execute an anti-skid control (ABS (sec. 0062) and that is configured to execute a braking force distribution control in which braking force on the front wheels is increased in comparison with braking force on the rear wheels (abstract, sec 0008, 0009, 0019-0021; figs. 1-5) when an operational condition monitored by a sensor among the at least one sensor satisfies a predetermined condition, wherein:

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braking force on the front wheels during execution of the braking force distribution control is increased (abstract, see 0008, 0009, 0019-0021; figs. 1-5), and wherein a braking force increment on the front wheel is determined based upon an increment of the braking action by the driver detected by the detector (abstract, sec 0008, 0009, 0019-0021; figs. 1-5); however,

when execution of the antiskid control for either of the front wheels is started (sec. 0062, 0068, 0075; figs.4-5), during the braking distribution control, the braking force increment on the front wheels is decreased (see decrease BRAKE SLIP, sec. 0062) during the braking distribution control (sec. 0062, 0068, 0075; figs.4-5).

Regarding claim 2, Watanabe (abstract, sec 0008, 0009, 0019-0021, 0062, 0068, 0075; figs. 1-5) disclose the device of claim 1, characterized in that braking force on the rear wheels is increased when the anti-skid control is executed.

Regarding claim 3, Watanabe (abstract, sec 0008, 0009, 0019-0021, 0062, 0068, 0075; figs. 1-5) disclose the device of claim 1, characterized in that the braking force increment on the front wheel is decreased until the increment reaches to zero.

Regarding claim 4, Watanabe (abstract, sec 0008, 0009, 0019-0021, 0062, 0068, 0075; figs. 1-5) disclose the device of claim 1, characterized in that the decreasing of the braking force increment on the front wheel is interrupted if the anti-skid control is terminated but the increment does not reach to zero.

Regarding claim 5, Watanabe (abstract, sec 0008, 0009, 0019-0021, 0062, 0068, 0075; figs. 1-5) disclose the device of claim 1, wherein the braking system comprises a hydraulic circuit connected with a master cylinder and braking force generating apparatus including wheel cylinders provided for the respective wheels; and the braking action is reflected in a pressure in

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the master cylinder, characterized in that the decreasing of the braking force increment is executed by decreasing braking pressures in the front wheel cylinders.

Regarding claim 6, Watanabe (abstract, sec 0008, 0009, 0019-0021, 0062, 0068, 0075; figs. 1-5) disclose the device of claim 2, wherein the hydraulic circuit comprises a hydraulic circuit connected with a master cylinder and braking force generating apparatus including wheel cylinders provided for the respective wheels; the braking action is reflected in a pressure in the master cylinder; and valves selectively allowing fluid communication between the master cylinder and the rear wheel cylinders, characterized in that the increasing of the rear wheel braking force is executed by opening the valves.

Regarding claim 7, Watanabe (abstract, sec 0008, 0009, 0019-0021, 0062, 0068, 0075; figs. 1-5) disclose the device of claim 5, wherein the hydraulic circuit comprises at least a common line supplying at least one of the front wheel cylinders and at least one of the rear wheel cylinders, and at least a pressure regulating valve in the common line regulating a pressure in the common line and selectively fluidly connecting the common line to master cylinder.

Regarding claim 8, Watanabe (abstract, sec 0008, 0009, 0019-0021, 0062, 0068, 0075; figs. 1-5) disclose the device of claim 7, wherein the hydraulic circuit is of cross dual circuit type (sec. 0021).

Regarding claim 9, Watanabe (abstract, sec 0008, 0009, 0019-0021, 0062, 0068, 0075; figs. 1-5) disclose the device of claim 7, wherein the hydraulic circuit is of front-rear dual circuit type.

Regarding claim 10, Watanabe (abstract, sec 0008, 0009, 0019-0021, 0062, 0068, 0075; figs. 1-5) disclose the device of claim 7, wherein the hydraulic circuit comprises valves

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selectively allowing fluid communication between the common line and the rear wheel cylinders, characterized in that the increasing of the rear wheel braking force is executed by opening the valves.

Regarding claim 11, Watanabe (abstract, sec 0008, 0009, 0019-0021, 0062, 0068, 0075; figs. 1-5) disclose the device of claim 6, wherein the opening of the valves is executed intermittently.

Regarding claim 12, Watanabe (abstract, sec 0008, 0009, 0019-0021, 0062, 0068, 0075; figs. 1-5) disclose a device for controlling braking of a vehicle having front and rear wheels, comprising:

a braking system (figs. 1A&B) generating braking forces on the respective wheels (abstract, sec 0008, 0009, 0019-0021; figs. 1-5);

at least one sensor 19 (fig. 1B) monitoring an operational condition of the vehicle including a detector detecting an amount of a braking action by a driver of the vehicle (abstract, sec 0008, 0009, 0019-0021; figs. 1-5); and

a controller 92 (fig. 1B) that is configured to execute an anti-skid control (ABS (sec. 0062) and that is configured to execute a braking force distribution control in which braking force on the front wheels is increased in comparison with braking force on the rear wheels (abstract, sec 0008, 0009, 0019-0021; figs. 1-5) when an operational condition monitored by a sensor among the at least one sensor satisfies a predetermined condition, wherein:

braking force on the front wheels is increased (abstract, sec 0008, 0009, 0019-0021; figs. 1-5) during execution of the braking force distribution control, but decreased during execution of

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the braking force distribution control when execution of the antiskid control for either of the front wheels is started during the braking force distribution control (0062, 0068, 0075; figs. 4-5).

Regarding claim 13, Watanabe (abstract, sec 0008, 0009, 0019-0021, 0062, 0068, 0075; figs. 1-5) disclose the device of claim 12, wherein a rate of decreasing the front wheel braking force when an operational condition monitored by a sensor among the at least one sensor satisfies a predetermined condition for terminating the braking force distribution control is faster than a rate of decreasing the front wheel braking force when anti-skid control for either of the wheels is executed.

Regarding claim 14, Watanabe (abstract, sec 0008, 0009, 0019-0021, 0062, 0068, 0075; figs. 1-5) disclose the device of claim 12, wherein the braking force on the front wheel is decreased until the braking force reaches to braking force requested by the braking action by the driver.

Regarding claim 15, Watanabe (abstract, sec 0008, 0009, 0019-0021, 0062, 0068, 0075; figs. 1-5) disclose the device of claim 12, wherein the increase of the braking force on the rear wheels is restricted during execution of the braking force distribution control but allowed when anti-skid control for either of the wheels is executed or when an operational condition monitored by a sensor among the at least one sensor satisfies a predetermined condition for terminating the braking force distribution control.

(10) Response to Argument

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i) Applicant's arguments filed 4/30/09 have been fully considered but they are not all persuasive.

Applicant traverses the 102 rejections in view of Watanabe. The examiner respectfully disagrees. Watanabe clearly disclose braking force on the front wheels during execution of the braking force distribution control is increased (abstract, see 0008, 0009, 0019-0021; figs. 1-5), and wherein a braking force increment on the front wheel is determined based upon an increment of the braking action by the driver detected by the detector (abstract, sec 0008, 0009, 0019-0021; figs. 1-5); however,

when execution of the antiskid control for either of the front wheels is started (sec. 0062, 0068, 0075; figs.4-5), during the braking distribution control, the braking force increment on the front wheels is decreased (see decrease BRAKE SLIP, sec. 0062) during the braking distribution control (sec. 0062, 0068, 0075; figs.4-5).

It appears that applicant has misinterpreted the prior art Watanabe. Sec 0062 of the prior art clearly and word for word indicates that *during* the execution of antiskid control (ABS) braking force distribution on the wheels are decreased. The wheels disclosed by the prior art include the front wheels since the prior art particularly calls for a brake force distribution P_{ti} that is to be distributed to each wheel in accordance with braking amount P_M (master cylinder pressure) executed by a driver. Thus the prior art clearly indicates that the braking force to the wheels are decreased during ABS (antiskid), the wheels including the front wheels.

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It is noted that at other occasions brakes to the front wheels *are increased* similar to applicant's claim. Thus the examiner respectfully submits that this point should not be confused with the ABS occasion when braking force to the fronts wheels *are Decreased* During ABS.

Applicant is basing their argument in reference to the prior art fig. 1A and 1B. It is respectfully submitted that applicant has erred in the interpretation of figs. 1A and 1B.

Applicant's on one aspect indicates that the prior art does not disclose ABS (antiskid) during BFD (Braking Force Distribution). Then on the contrary applicant is admitting (see applicant's brief page 17, lines 34-35 that the prior art disclose ABS during BFD by pointing to fig. 4 step 33: No, step 34: No, step 35: No, Step 36: Yes and at Step 37 braking force on the wheels is performed by decreasing braking force slip on the wheels, which wheels include front wheels. Applicant deliberately failed to address step 33: No, step 34: No, step 35: No, Step 36: Yes and at Step 37. Instead applicant's reference to step 33: yes, step 34: no and step 38 is misplaced since the cited step 33: yes, step 34: no and step 38 do not recite ABS. On the other hand applicant's failure to address the prior art step 33: No, step 34: No, step 35: No, Step 36: Yes and at Step 37 is a misinterpretation of the prior art.

However as already pointed out it is noted that step 33: No, step 34: No, step 35: No, Step 36: Yes and at Step 37 (which applicant ignored) clearly indicate that if ABS is applied to the front wheels (left front and right front) then BFD is performed at step 37 (see sec. 0062, 0074 to 0076).

Applicant further argues that the prior art does not consider having ABS control started during BFD control because the prior art is determining whether or not BFD control should be allowed. The examiner disagrees. The prior art fig. 4 is BFD control process. During the BFD

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control process of fig. 4, antiskid control (ABS) MUST be started as called for in the claims.

During BFD the ABS is started by calculating Pti so as to decrease braking force on the front wheels as disclosed in sec. 0062. As such it is believed that the prior art anticipates the claims since the prior indicates that fig. 4 is a BFD control process and further that ABS must be started.

Applicant then goes forth to argue that the prior art does not explain how to perform ABS and BFD simultaneously. The examiner does not understand the point of the argument since explaining how to perform ABS and BFD simultaneously is not recited in the claims. the argument therefore is moot. The claims further do not require that there should be consideration whether BFD is already occurring. As such this point of argument as urged by the applicant is not convincing. As already indicated, fig. 4 of the prior art is a BFD control process. During execution of the BFD process of fig. 4, ABS is started as called for in the claims.

Applicant's further arguments on page 19 and 20 of the brief are beyond the scope of the claimed invention, thus they are moot.

The prior art further anticipate the rest of the claims in view of anticipating the independent claims.

(11) Related Proceeding(s) Appendix

No decision rendered by a court or the Board is identified by the examiner in the Related Appeals and Interferences section of this examiner's answer.

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,

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/Ronnie Mancho/

Examiner, Art Unit 3664

/KHOI TRAN/

Supervisory Patent Examiner, Art Unit 3664

/MJ/ Marc Jimenez TQAS TC 3600